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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,413	12/18/2001	James J. Kalafut	01-447	5241

719 7590 09/03/2003

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PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

MULL, FRED H

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,413

Applicant(s)

KALAFUT ET AL.

Examiner

Fred H. Mull

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6 and 8-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,8,11-13,18 and 23-28 is/are rejected.
- 7) ☒ Claim(s) 4-5, 9-10, 14-17, and 19-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 23 is objected to because of the following informalities:

In line 4, the “.” should be replaced with a --;--. Appropriate correction is required.

Response to Arguments

2. Applicant's arguments filed July 28, 2003 have been fully considered but those relevant to the claims rejected below are not persuasive.

The first relevant argument is that of the last paragraph of p. 11, which lists some of the claim limitations and states they are not taught or suggested by Klein. The examiner believes Klein teaches these limitations, as described in detail in the rejection below.

The second relevant argument is that of the fourth paragraph of p. 12, which lists some of the claim limitations and states they are not taught or suggested by Stone. The examiner believes Stone teaches these limitations, as described in detail in the rejection below.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 6, 8, 11-13, 18, and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein.

In regard to claim 23, Klein discloses dividing the specified period of time into at least two periods of time including a first period of time and a second period of time; determining if the first coverage area is covered by a least one GPS satellite at the specified point in time; determining if the second coverage area is covered by a least one GPS satellite at the specified point in time; predicting an area of coverage of the site by at least one GPS satellite as a function of the determination of coverage of the first and second coverage areas at the specified point in time; predicting an area of coverage of the site by at least one GPS satellite as a function of the determination of coverage of the first and second coverage areas at the specified point in time; and determining a condition of reduced coverage as a function of the predicted coverage at the specified point in time; displaying the area having reduced coverage at the specified point in time on a terrain map (Fig. 1), where double hash marked section whose east-most portion covers California, shows a reduced area of coverage at a specified point in time that has been determined, and the single hash marked sections show that reduced coverage area incremented over time over a 24 hour period. Klein further discloses placing a pseudolite at a location at the site to provide coverage in the area having reduced coverage at the specified point in time (p. 307-309, section entitled "Performance During Periods of Poor Observability"), where the pseudolite is placed in the area of poor observability over California. The area of reduced coverage was incremented over several periods (including a first period and a second period) of time over a 24 hour period (the specified period of time), and it was determined that a reduced area of coverage occurred over the continental United States over the area of California shown.

In regard to claim 24, the specified period of time is a future period of time (p. 304, "Constellation", 3rd paragraph, which states that satellite coverage repeats every 24 hours, so that

the coverage shown in Fig. 1 will show each further day as long as the group of satellites in orbit remains unchanged).

In regard to claim 25, San Francisco was chosen for the pseudolite location and the pseudolite was installed after the area of reduced coverage was determined to be over that portion of California, and was predicted to repeat in the future every 24 hours. That is, it was determined that it would be useful to place a pseudolite at this location for the time shown in Fig. 1 to aid in positioning the next day and the day after that and the day after that, etc., so that pseudolite was placed in the future of the original determination to provide correction for all future times after that.

In regard to claim 26, Klein further discloses determining changes in the levels of coverage of the site as a function of a progression of time; and displaying the changed in levels of coverage as a function of increasing and decreasing coverage during the progression of time (Fig. 1).

In regard to claims 1, 6, 8, 11-13, and 18, Fig. 1 was compiled by measurements taken at individual time in individual areas, so aggregating the data can be considered looking at various areas over time as well as looking at various times over the areas.

4. Claims 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Stone.

In regard to claim 23, Stone discloses dividing the specified period of time into at least two periods of time including a first period of time and a second period of time; determining if the first coverage area is covered by a least one GPS satellite at the specified point in time; determining if the second coverage area is covered by a least one GPS satellite at the specified

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point in time; predicting an area of coverage of the site by at least one GPS satellite as a function of the determination of coverage of the first and second coverage areas at the specified point in time; predicting an area of coverage of the site by at least one GPS satellite as a function of the determination of coverage of the first and second coverage areas at the specified point in time; and determining a condition of reduced coverage as a function of the predicted coverage at the specified point in time; displaying the area having reduced coverage at the specified point in time on a terrain map (p. 563, 2nd column, 2nd paragraph; Figs. 1-2), where the inherent repeating 24 hour interval must be incremented into at least five periods for the 20% resolution stated. Stone further discloses placing a pseudolite at a location at the site to provide coverage in the area having reduced coverage at the specified point in time (p. 562, 1st column, last paragraph).

In regard to claim 24, the specified period of time is a future period of time (p. 563, 2nd column, 2nd paragraph, Fig. 2), where the measured percentages are discussed as continuing to be valid into the future, and not just as past measurements, because, while it is not explicitly stated, it is inherent that the satellite coverage repeats every 24 hours, so that the coverage will repeat each further day as long as the group of satellites in orbit remains unchanged.

In regard to claim 25, the rim of the area (p. 562, col. 1, last paragraph) was chosen for the pseudolite location and the pseudolite was installed after it was determined that an area of reduced coverage would occur in the pit. That is, it was determined that it would be useful to place a pseudolite at this location for a time when reduced coverage occurred, so that pseudolite was placed in the future of the original determination to provide correction for all future times after that.

In regard to claim 26, Stone further discloses determining changes in the levels of coverage of the site as a function of a progression of time; and displaying the changed in levels of coverage as a function of increasing and decreasing coverage during the progression of time (Figs. 2 and 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stone.

Since the method of Stone applied to a small area such as an open pit mine (Fig. 1), it would have been obvious to implement it in a mobile device so that it can be relocated to various sites to determine the best configuration of pseudolites at those sites.

6. The examiner also finds the following reference(s) relevant:

Parkinson, which also discloses that satellite coverage repeats every 24 hours (p. 262-263, section entitled "The Problem").

Applicant is encouraged to consider these documents in formulating their response (if one is required) to this action, in order to expedite prosecution of this application.

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Allowable Subject Matter

7. Claim(s) 4-5, 9-10, 14-17, and 19-22 is/are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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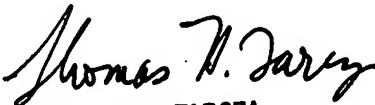
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 703-305-1250. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 703-360-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Fred H. Mull
Examiner
Art Unit 3662

fhm


THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
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